

REMARKS

This is in full and timely response to the above-identified Office Action. The above listing of the claims supersedes any previous listing. Favorable reexamination and reconsideration are respectfully requested in view of the preceding amendments and the following remarks.

Claim Amendments

In this response, the subject matter of claim 8 has been introduced into claim 6 and claim 8 has been cancelled. Also, claim 6 has been amended to clarify the features of the invention.

Rejections under 35 USC § 112

The rejection under 35 USC § 112 first paragraph is respectfully traversed. The expressions "a genetic algorithm" and "a local search method" are both defined sufficiently in the specification to allow a person of skill in the art to use the invention with the need to resort to undue experimentation.

The contents of general processing of a GA (genetic algorithm) are well-known. Also, a summary of GA processing is found in the originally filed specification - see paragraphs [0029] to [0032].

A local search method includes the heretofore known Powell method as mentioned in the filed specification by way of example, along with multiple well-known methods. In the disclosed embodiments, the heretofore known arbitrary method is applicable. Therefore, a reader of ordinary skill in the art can easily perform the present invention by adopting one of the heretofore known GA processing methods and a well-known arbitrary local search method with reference to the originally filed specification.

A quick Google search reveals over 11, 000,000 hits for the term genetic algorithm and in fact there is a definition on Wikipedia, the free encyclopedia which indicates that a genetic algorithm (GA) is a search technique used in computing to find exact or approximate solutions to optimization and search problems. Genetic algorithms are categorized as global search heuristics. Genetic algorithms are a particular class of evolutionary algorithms (also known as evolutionary computation) that use techniques inspired by evolutionary biology such as inheritance, mutation, selection, and crossover (also called recombination).

Inasmuch as that which is well known in the art need not be disclosed in detail, it is respectfully submitted that the rejections are without sound foundation and should be reconsidered.

In connection with the rejection under 35 USC § 112, second paragraph, claim 6 has been amended to obviate the rejection.

Rejection under 35 USC § 102

The rejection of claims 6-9 under 35 USC § 102(b) as being anticipated by Hatakeyama (US 6,542,469) is respectfully traversed.

As set forth in amended claim 1, the plurality of processing devices is respectively configured to individually and simultaneously execute a genetic algorithm. Also, said plurality of processing devices respectively includes "migration devices".

The above mentioned "migration device" sends the predetermined number of individuals from an individual population of the respective processing devices to the other processing devices with respect to each generational change processing of the predetermined number of the genetic algorithm, and further receives the predetermined numbers of individuals from the other processing devices.

This population is a group of the individuals which is used for

executing the genetic algorithm in the respective processing devices.

In the claimed invention, each CPU independently executes the GA processing for a few generations (two generations in Fig. 2), and then, the "migration" is performed, the population of each CPU is updated, and the GA processing is executed for a few generations (two generations in Fig. 2) again.

The above-mentioned migration processing is disclosed in the originally filed specification – see paragraphs [0035], [0036] and Figs. 2 and 6.

In the cited reference to Hatakeyama, each client estimates a response time for each path based on an actual response time for access of individuals, and the minimum estimated response time. In an embodiment of the cited reference, an estimation individual is obtained from the other school (client). However, the specific processing content is not clear.

The cited reference does not have a plurality of processing devices to individually and simultaneously execute the genetic algorithm and having migration devices which, for each of a predetermined number of generation change processing of the genetic algorithm, send a predetermined number of individuals from a parent population of the individuals using processing of the genetic algorithm to others of said plurality of processing devices and receives a predetermined number of individuals from other processing devices to the parent population. Also, the cited reference does not have search processing control means configured for collecting interim results of searches from the processing devices assigned to the processing by the genetic algorithm and using search processing by the local search method.

The parameter adjusting device of the present invention has a specific effect to be able to parallelize the search processing and make the search processing more efficient by assigning a part of the processing devices to the local search processing, collecting the

interim results of the GA processing, and using the interim results for the local search processing, thereby being able to search with a high degree of accuracy within a short time compared to the method wherein only the GA processing is distributed or the method wherein the GA processing and the local search processing are simply parallelized.

The above-mentioned structure of the present invention is not disclosed at all in the cited reference, so that the claimed invention is not distilled therefrom.

Conclusion

It is respectfully submitted that the claims as they have been amended are allowable over the art which has been applied in this Office Action. Favorable reconsideration and allowance of this application are courteously solicited.

One month extension of time is hereby requested. A credit card authorization form in the amount of \$130.00 is attached for the one month extension of time.

Respectfully submitted,

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